

ERNEST FLAGG TELLS HOW CITY'S ENORMOUS FIRE LOSS COULD BE REDUCED—THE SKYSCRAPER PROBLEM

Architect of the Singer Building Talks of Two Great Needs of New York's Building Laws—How the Advantages of the Skyscraper Can Be Preserved While Eliminating the Disadvantages

and elsewhere fifty years ago it is altogether probable that our fire loss would now be no greater than it is in European cities, while the cost involved would have been little when compared with the saving effected.

During the last fifty years four first-class American cities, Chicago, Boston, Baltimore and San Francisco, have been almost wiped out of existence by general conflagrations, yet neither seems to have learned by these costly demonstrations of the inadequacy of our methods. In each case those cities were built up again on the same plan as before and now only await a favorable combination of circumstances to undergo a similar ordeal. Here in New York every year covers many square miles with buildings which are liable to be swept away by fire in a night. Could anything be more foolish when the way to avoid the danger is so perfectly apparent?

Our building laws are voluminous, but they bring us no safety, and when we inquire into their origin we find that they grew up by chance and are founded on no scientific principles. As objectionable practices made their appearance from time to time they were forbidden and specific directions given for doing the work in another way, and this method of making the law has been followed ever since. This way of making the law involves endless complications, causes dissatisfaction and injustice, and is altogether wrong and unscientific.

All the community has the right to demand of the builder is safety and justice in building operations, and it is manifestly proper that these should be obtained in the most simple and direct way, with the least hardship to or interference with private interests. When the law undertakes to tell me how I shall build, what materials I shall use, how I shall use them to accomplish certain results, it goes outside of its legitimate province and interferes unnecessarily with personal liberty.

To require that staircases shall be enclosed by partitions capable of withstanding a certain degree of heat applied for a certain length of time is proper enough, but to require that a certain kind of material of a stated thickness shall be used to accomplish the object is all wrong; for this assumes that there is only one road to safety, while there may be many.

It is this method of making the law which has made so much trouble and caused such great dissatisfaction during the last few years in the various attempts to revise the building code of Greater New York. It is impossible to specify certain materials for general use and forbid others without the appearance of favoritism. If instead of descending to these details the law confined itself to the establishment of the proper bounds of safety, within which all might be free to act, every practical purpose would be accomplished and injustice avoided.

The two cardinal features of all the

certain advantages attached to these high buildings is evident enough from the fact that we have built so many of them, and those advantages ought not to be lost sight of in the reaction which now seems to be setting in against them. They are as follows:

1. When not too close together they afford most agreeable, healthy and desirable quarters.

2. They increase the available floor area, a very important consideration, especially on Manhattan Island.

3. They increase the value of land by permitting greater use to be made of it.

4. They swell the city's tax roll because they do make land more valuable.

5. Some of them are very good looking, and they have come to be regarded as distinctive of our type of architecture.

6. We are used to them, and a large part of the community do not want to give them up.

Is it not evident, therefore, that a plan for regulating high buildings which will remove their bad features while retaining their good ones should be the best one to adopt?

Of course the first plan to suggest itself is a simple limitation of height, such as is found in almost all European cities. This expedient is undoubtedly the best from the aesthetic standpoint for places where high buildings do not already exist.

Recently, the encroachments of private owners on the streets of Manhattan in the form of porches, arcades, &c., have been removed from some of the more important thoroughfares, and few people can be found who do not admit that the improvement in appearance is great. The streets have lost somewhat of their ragged, provincial aspect and have assumed more of a metropolitan air, but this improvement, though great, would appear slight in comparison with the improvement which would result if the sky line could be regulated. Unfortunately that cannot be done on Manhattan Island. We have the high buildings and we cannot get rid of them.

The damage has been done, and it can serve little purpose to shut the barn door after the horse has left. Let us then consider the benefits other than aesthetic which are to be hoped for through a regulation of the height or area of buildings. In my judgment a simple limitation of height for Manhattan Island would be entirely ineffectual in securing them, because no limit of the kind sufficiently low to accomplish the desired objects will be agreed to here.

Now, unless I am a very bad prophet another mistake is likely to be made in spite of warning, that is to say, a limit of height placed on buildings far above the level at which a very effective and securing the objects sought for.

Let us see what this effective height is.

The most abundant evidence is available on that point, namely, the experience and practice of all that part of the civilized world where municipal affairs are admittedly well regulated. It is a thing which is perfectly well understood in all the great cities of Europe, and neither the introduction of the steel frame method of construction nor the elevator, those two factors which have wrought such a change in our method of building, have been able, so far as I know, in a single instance to induce a change in the standard of height. The standard of height for buildings is equal to about once the width of the street and that it would be folly to exceed it.

If a demonstration is needed to show

that about this same limit is necessary here a very interesting one can be found right at hand. A certain building concern has built some large blocks of model tenements. The height of these buildings is 60 feet, and the area left vacant 30 per cent of the area of the land, yet the buildings are only fairly well lighted. This illustration is important because rare in America.

The time has certainly come when we should understand that the open surroundings which have heretofore made our high buildings desirable cannot continue, and regulations should be made accordingly.

If we consider the list of evils, as enumerated, which has resulted, or which seems likely to result, from the unrestricted erection of high buildings, and also the list of the admittedly good points which these buildings possess, we find that all the evils with the exception of ugliness are due to overcrowding, and that all the good qualities are dependent upon not overcrowding.

Therefore we can safely conclude that a plan which will prevent overcrowding while still permitting the erecting of high buildings is the best one to adopt. If such a plan can be found which is not the problem solved, for what more can be desired than to avoid the evils while retaining the benefits of high buildings?

The plan I propose is very simple and I think entirely practicable. It is as follows:

I would establish a general level of height for all buildings low enough to be effective in accomplishing the objects already enumerated, that is to say, equal to about once the width of the street on which the building faces, without other restriction as to area, than that the least horizontal dimension of any court or area left vacant for light should equal a certain proportion, say one-tenth of the height of the wall or walls of the building to which it belongs and which enclose or partly enclose it.

Then on an area sufficiently restricted, say, one-quarter of the area of the plot on which the building stands, I would allow the building to any height without other restriction than that this part of the building be set back somewhat from the street so as not to darken it. For corner plots and plots facing on open spaces more liberal rules might be made than for inside plots. I would also allow an owner to dispose of his right to build high in favor of any adjoining plot.

The effect of such a law would be as follows:

1. It would act as an efficient check on the building of high buildings and consequently a check on congestion, for not every one would exercise the right to build above the general level if that part of the building was restricted to so small a percentage of the area of the plot, and it would not generally pay to do so at all on small plots. If the right was exercised in such cases the height would then be sufficiently restricted by the practical requirements for elevator service and staircases, but even if the owner of a small plot was deterred by these considerations from building high he would not necessarily lose the value of his privilege to do so, because he would have the right to dispose of it in favor of adjoining land.

2. Every owner would be protected in his right to a fair share of the light of day, because if adjoining owners could build above the general level only on one-quarter of the area of their plots no great damage could be done him, however the buildings might be disposed of. If an owner sought to acquire his neighbor's right to build high so that he could cover a greater percentage of his plot than otherwise could he would have to pay what it was worth, and the person selling would thus receive compensation for damage done him.

3. Sufficient light for the streets would be assured both because the high parts of buildings would be set back from the street line and because they would occupy so small a percentage of the area of the land.

4. The plan would assure to every owner of land the right to build high on an area as large as can be built on without injury to the rights of his neighbors, and the right of the public to light for the streets, and this is all the liberty he ought to have, for it is all he can exercise without injury to others.

5. Although the value of land might be decreased by this plan in certain cases the general average of value would undoubtedly be increased because every one would be assured that his light could not be seriously obstructed. That this is a most valuable asset is being more and more realized as we find our land shut in and darkened by the greed of neighbors.

6. Under this rule land values would be more evenly distributed, for by just so much as the plan would serve as a check on the erection of high buildings it would serve to spread the area of business centers. The area of the financial district, for instance, has scarcely increased at all during the last forty years, while the floor area in that district, much of which is most insufficiently lighted, has increased tenfold during that time.

7. The separation of high buildings which the plan would effect would greatly lessen the fire risk, because there would be less danger of fire leaping from one high building to another. This risk might very properly be further reduced by requiring that all structures which exceed the general level of height should be made entirely without the use of inflammable material.

8. While it must be admitted that a flat limitation of height would be the best plan from the aesthetic standpoint, provided we had no high buildings, that condition does not exist, and accepting the case as we find it this plan seems much better. Under it some degree of order would be secured by the establishment of a uniform cornice line for the street frontades at the general level, and this is all that any flat limitation of height could do. The one redeeming feature of our high buildings from the aesthetic standpoint is that they are picturesque when seen from a distance. The plan I propose would certainly add to that quality. The high parts of the buildings, as they would be exposed to view from all sides, would be treated architecturally on all sides. The most characteristic, interesting and beautiful of our high buildings are undoubtedly those which have been treated as towers, and this plan would certainly encourage that treatment.

9. The plan while placing a check on the erection of high buildings would deny to no landowner the right to build one.

10. It would not hinder the construction of more of that kind of floor space which all who have occupied the upper floors of high buildings know to be the most desirable, healthy, and agreeable quarters which it is possible to get. On the contrary it would permit of the building of just as much of it as can be lighted without doing injustice to adjoining owners and to the public.

11. It would therefore permit of the utilization of the land to the greatest practicable extent.

12. The plan would be applicable to and advantageous for all classes of buildings.

13. Unlike the flat limitation of height it would tend to supply air, not shut it out, it would contain no inducement to limit story heights and the permissible area which could be occupied above the general limit would be fixed at a point where no proper shutting out of light could occur.

In short this plan would secure to us all the advantages of high buildings while avoiding their disadvantages. What more is there to desire? Moreover, it is the only plan which has been suggested, as far as I know, which would accomplish these things.



Ernest Flagg.

Another attempt is being made to revise the building code of the city. At the same time the question of limiting the height of skyscrapers is under consideration. Ernest Flagg, architect of the Singer Building, next to the highest in the world, sets forth in the following article two opportune and important theories. By one the enormous fire loss would be reduced; by the other the advantages of skyscrapers would be secured and their disadvantages eliminated.

By ERNEST FLAGG.

FEW things are more worthy of study than the building habits of a race, for they tell more surely than anything else of an important element in the customs and life of the people.

In earlier times in the United States immediate shelter was the prime consideration and little attention was paid to any other. Money and labor were scarce and incombustible materials expensive, while wood was abundant and cheap, so flimsy and dangerous building habits were formed, which still exist.

The result is a most extraordinary fire loss. This loss is from ten to twenty times what it ought to be and what is in countries where better building methods prevail. Although we are beginning to realize this fact, strange to say, we take no steps to prevent it except by improving our firefighting ap-

paratus. We do not strike or attempt to strike at the root of the evil by changing our building habits. Every year we patiently bear a loss by fire equal to about one-half the cost of new construction, to say nothing of the frightful loss of life which accompanies it; yet for a tithe of this cost we could build in a way which in time would remove the danger altogether.

Any one who will take the trouble to examine the building regulations of cities where the fire loss is low will find them simplicity itself. A few rules based on common sense accomplish the object. The chief one of these is that walls which separate buildings shall be so designed as to be able to stand upright independently of any support afforded by the inflammable floor systems which they carry. Another is that the basement story or cellar shall in all cases be covered by incombustible material. If these two simple requirements had been instituted in New York

RECALLS PART OF FIGHT IN WHICH CUSTER AND HIS COMMAND PERISHED

NEXT Wednesday, June 25, is the thirty-seventh anniversary of the battle of the Little Big Horn in Montana in which Gen. George A. Custer was killed and his command, consisting of 267 men of the Seventh United States Cavalry, was annihilated by a force of Sioux Indians led by Sitting Bull and the Northern Cheyenne Indians under command of Two Moons.

There is living in New York to-day a man who can describe part of the battle from personal experience. He is Justice William E. Morris of the Municipal Court. At the time of the battle he was a private in the Seventh Cavalry, his company being in Major Reno's column. He was badly wounded in the fight. Major Reno's column was sent to strike the upper end of the Indians' camp while Custer struck the lower end.

Justice Morris can only be persuaded to write up his story after much urging to talk about that battle thirty-seven years ago. Here is what he said yesterday:

"I was living in Boston with my mother and other relatives in 1875. On September 22 of that year my half brother, Byron L. Tarbox, having decided to become a soldier, I accompanied him to the recruiting office of the 7th Cavalry, where he was enlisted. He remained, took the oath and was given a uniform for the purpose of being sent to the front. I remained at home."

"My recruiting sergeant said to me, 'Don't you take on too?' I told him I would like to. He looked at me and asked, 'How old are you?' I told him I was 21. He said, 'All right, but you must be on the scout and measure your gauge and weight, and I will tell you what, if you don't measure up, much better off at home, and was fitted with a uniform and given a kit."

"The next day my brother and I were sent to New York, and from there to the Barracks, at St. Louis. There we were assigned to the Seventh Cavalry and sent to Fort Abraham Lincoln, Montana, where I was placed in the troop and my brother in another."

"We were drilled all that winter and the following spring. The hostile Indians having become unusually bad in Montana and that region, orders came from Gen. Terry in the spring to take the army against them. Gen. Terry ordered Custer to take the Seventh Cavalry and proceed in the direction of the Little Horn Valley. It was understood that Custer was to locate the Indians, but if possible not to bring on an engagement."

"It must be explained here that some

Justice William F. Morris Was a Member of the Seventh Cavalry at the Battle of Little Big Horn—Was Wounded While Fighting in Major Reno's Column

time before this Gen. Custer had incurred the enmity of the War Department. In fact Secretary Belknap either had or was about to order the General to Washington to answer certain official charges. It is therefore believed by many that Gen. Custer resolved if the opportunity offered, to make such brilliant showing against the enemy as would in part counteract the feeling against him at the War Department, thus restoring his prestige.

"Led by our two white scouts and by the Crow scouts, among them Curly, Man-That-Goes-Ahead, Bull Plenty and Hairy Moccasin, we travelled toward the valley of the Little Big Horn. On the night of June 24 the scouts came in with the news that they had seen signs of the hostiles on the Little Big Horn River. Gen. Custer at once gave the command to halt for the night."

"We saddled up at dawn and took up the march. We travelled along until the sun was quite high, when the scouts came riding in at top speed with word that they had seen an immense camp of Indians on the banks of the Little Big Horn. The column was at once halted."

"Gen. Custer called a council of officers and he decided that the force should be divided into three columns, he to take five companies and, skirting behind the high ridge on the right bank of the river out of sight, advance a couple of miles and strike the Indian camp from below. Major Reno was to advance with four companies straight down the valley and on the left bank of the river, while Capt. Benteen was to continue well in the rear of Reno with the pack train guarded by a detail of ten men from each company."

"I remember only too well that as Custer and his column moved away my brother Byron called out to me, 'Look out for your scalp, Bill. Those Indians don't like red headed fellows.' My hair was red in those days. I answered with some laughing remark. That was the last time I ever saw my poor brother, dead or alive."

"Reno moved down the valley as ordered. Our presence was first noted by an Indian youth who was a mile or more from the camp tending a herd of ponies. He raced back to camp on a pony and gave the alarm. In less than a minute the entire camp was in an uproar."

"Indians testified long afterward that they had been taken by surprise and were preparing to flee, leaving their spears and contents and taking only their squaws, papooses and horses in the endeavor to escape. Meanwhile some of the warriors, for the purpose

of holding us in check until the main body of Indians had time to move off, advanced to meet us."

"Firing began. Soldiers dropped from their saddles and some Indians fell, but it took only a few minutes for the Indians to discover how small a force Reno had, and preparations to flee were abandoned. The Indians turned against us to the number of some 6,000. It seemed to me that day that as far as I could see there was nothing but Indians on horseback riding toward us and flanking us on both sides."

"We were particularly daring and confident because the Northern Cheyennes had whipped Gen. Crook on the Powder River a few days earlier."

"I was riding near Major Reno. I remember he called out, 'Men, we are surrounded. Our only chance is to draw your pistols and follow me.' Up to that time we had been using our carbines, but the fighting became so hot we had no time to reload our carbines. As Reno shouted for our pistols, he turned his horse and tried to lead the way up the bluff, where higher ground would have given us a certain advantage."

"Still our troops continued to be shot out of their saddles. Orders were given for two troops to dismount and send their horses to the rear. In a few minutes word was brought to Reno that the Indians had worked their way around to the rear and were shooting our horses. Without our horses we would have been at a still greater disadvantage. Major Reno realized that and gave the order, 'Retreat to your horses.' That was the only mistake that Reno made during the entire fight. He has since been accused of cowardice; of having become so rattled that he did not know what he was doing nor what orders he was giving; of throwing away his sidearms; of giving these orders in turn and immediately following each other. 'Mount, dismount, mount, dismount.'"

"I was near him during this time and never heard him give such orders nor did I see him throw away his sidearms in his excitement or whatever you choose to call it; but he did make a grievous mistake when he gave the order for the men to retreat to their horses. They turned their faces in the direction of the horses as they ran toward them, which, naturally, brought their backs to the advancing Indians."

"Then it was that Captain T. A. French saved the day. He saw the mistake his superior officer had made and holding his pistol above his head roared out in his nasal tone, 'Steady, men, steady! Face the enemy! I'll kill the first man that turns his back! Face

the enemy and fire! Fall back to your horses, but retreat backward! The men obeyed him and reached their horses and mounted."

"Then everybody tried to ride up the bluff to the high ground. As we made for the hillside Capt. French's company, or striker as they are called in the army, a man named Laurens, fell from his horse shot through the stomach. I dismounted for the purpose of helping him to mount behind me, but he was in such agony that he shrieked, 'Leave me alone, for God's sake!' He refused to try to stand up and I dragged him to a tree, where I propped him up with his back against the trunk. I could not aid him further, so I mounted and joined the rest of the force that was making for the bluffs."

"By this time I had fallen so far to the rear that I was among the last to reach the river. I remember that Lieut. Luther R. Hare, who was then a lieutenant in the 7th Cavalry but who became a Brigadier-General in the Spanish-American War, rode past me like a flash on a big sorrel horse."

"Lieut. Mackintosh, who was a civilized Indian but from one of the civilized tribes in the East, and who was an educated man and a relative by marriage of Lieut. Gibson, was killed near me. The Sioux recognized him as an Indian and for that reason attacked him with especial fury. He was shot and cut to pieces."

"I could not find a ford in the river and jumped my horse down a twelve foot embankment into the water. There I found Lieut. Hodgson, Jack of Clubs. We used to call him in the 7th Cavalry. He had been shot through both hips and I can still yet remember how the blood from his wounds even stained the running water of the river. He tried to raise himself up and caught hold of one of my stirrups. I reached over and tried to pull him up into my saddle, but he was too badly wounded to be able to help himself and I was not strong enough to lift him across my horse. He fell back on the river bank, so I had to ride on."

"As I rode up the bluff I overtook two soldiers, one named Tom Gordon and one called Bill the Tinker. They were riding up the bluff too. I remember saying to Gordon, 'It was pretty hot down here.' He answered, 'You got used to this, you little shavetail. Shavetail is the term applied to recruits in the army.' As he spoke there came a rain of bullets from the hillside. Gordon fell dead with a bullet in the brain. Bill the Tinker was shot through the throat and fell from his horse. I was shot in the left breast by a big Indian not far away, but managed to stay

on my horse and reached the top of the bluff, where I joined the rest of the command."

"Here we succeeded in intrenching. Some time afterward Capt. Benteen with the pack train came up and reinforced us. We could hear the firing of Custer's men. Through the rattle of atmosphere of Montana it sounded as if comparatively near by, but as a matter of fact it was several miles distant. We expected Custer would come to our aid and no doubt he thought that we would go to his aid, but surrounded as both columns were there never was a time when that was possible, military and other critics smile to the contrary notwithstanding."

"Gen. Terry, with Gen. Gibbon and a heavy force of cavalry, infantry and some artillery, arrived on the scene on June 27. The wounded were transported to the Missouri River, where we were placed on the steamer Far West and taken to Fort Lincoln, where we were placed in the hospital. I was laid up with my wound for two months. I remained in the army for some years afterward, serving through the Nez Perce campaign."

HERE'S THE BIG FEEDERS.

CHAMPION Fried Egg Eater of the Berkshire was the title of Louis Morris of Housatonic, Mass., before he entered in a recent egg eating contest on a wager. He had a record of twenty-two eggs and the wager was on his contention that he could easily increase this record to twenty-five.

When he reached seventeen eggs he was seized with an attack of acute indigestion and a doctor worked over him for an hour before he was restored to consciousness and pronounced out of danger. He also has a record for fifty-four eggs of green corn.

At the breakfast dinners of many political clubs astounding records are made in the consumption of viands. Some of those who take part think nothing of eating ten and twelve pounds of meat at the sitting. At one clam bake held at College Point recently eight baskets of food were eaten by one diner. This basket included a leg and a breast of a chicken, twenty-five clams, two ears of corn and four potatoes. This record is declared accurate and authentic and is posted up in an East Side clubroom.

A Rhode Island farmer had a record of half a bushel of walnuts, of which he was extraordinarily fond. He used half a small bag of salt while eating them. A New Jersey blacksmith on a recent wager ate nearly a peck and a half of cherries. He said he could go on eating "forever," as he put it, but those who witnessed his feat declared they had seen enough to prove the eater a wonder. A Chicago man inordinately fond of mush and milk lived on it for a week not long ago, eating four great bowlfuls of it three times a day.



Justice William E. Morris in uniform of Captain in 69th Regiment, New York National Guard.